

C L A I M S

1. Process for removing carbon dioxide from sulphuryl fluoride, comprising the step of contacting the carbon dioxide-containing sulphuryl fluoride with 4 Å (= 0.4 nm) molecular sieve.
- 5 2. Process according to Claim 1, characterized in that the process is carried out batchwise or continuously.
3. Process according to Claim 1, characterized in that the laden molecular sieve is regenerated.
- 10 4. Process according to Claim 3, characterized in that it is carried out continuously in alternating operation, such that one or more adsorbers are regenerated and one or more adsorbers are contacted with the sulphuryl fluoride.
5. Process according to Claim 1, characterized in that the contacting stage is carried out at a temperature in the range from 0 to 40°C.
- 15 6. Process according to Claim 1, characterized in that the contacting stage is carried out at a pressure of 1 bar (abs.) to 11 bar (abs.).
7. Process according to Claim 1, characterized in that the sulphuryl fluoride is also contaminated with sulphur dioxide and in that at least a portion of the sulphur dioxide is adsorbed together with the CO₂.
- 20 8. Process according to Claim 1, characterized in that further purifying operations are additionally carried out to remove impurities from the sulphuryl fluoride.
9. Process according to Claim 8, characterized in that a further purifying operation undertaken is a wet or dry purification which is undertaken before the sulphuryl fluoride is contacted with 4 Å molecular sieve.